



By Joshua Lederberg

Budget Bureau Decisions Enter the Public Arena

DURING the last year, the Bureau of the Budget's organization and personnel have received unprecedented public notice. Its leaders have lectured and written in some detail about their philosophy of planning.

This is a healthy innovation, for it exposes to public criticism some of our society's most crucial decision-making — decision making that is labeled as mere staff advice to the President.

The new open policy must be the result of a conscious choice, perhaps only as a reaction to mounting criticism of the obscurity that has cloaked the final process of bringing the executive program into harmony. (The development of an invisible bureaucracy of confidential advisers to the President is one of the predictable paradoxes of democratic political life, however, and responsibility for crucial advice may now simply shift to some other more informal and anonymous group.)

THE BUREAU of the Budget's roles in interpreting needs and goals in science and technology are among its most difficult, because of the very appeal of science to rational judgment.

In the words of Assistant Director William D. Carey "public opinion today expects government to make its decisions and choices by a more rational process than simple reliance on good intentions and sloppy altruism. Given the plurality of national goals to which we are committed in one degree or another, the budget is an exercise for relating resources to priorities with

a semblance of rationality and relative justice."

In an article in *Science* magazine, Carey also remarks wisely that "our definition of investment has come to include the field of human resources . . . investment in education is more than socially 'good'; it is economically productive. These investments can no longer be scorned as hand-outs by soft-headed social reformers." Many educators have taken this idea for granted for so long that we may forget how recently, and perhaps how narrowly, it has been publicly considered.

THERE ARE, however, disturbing signs that the widely advocated extension to research of program-budgeting analysis needs a cost-benefit analysis of its own. The pluralism of U.S. science policies and the strong commitment to basic research are difficult to rationalize, explain and defend except for the unparalleled vigor of our scientific and technological position in the world.

Inevitably, the criticisms of U.S. science in a recently announced study by the European Organization for Economic Cooperation and Development (OECD) were quoted more emphatically in the press than the plaudits. In evaluating these criticisms, we have to remember that their authors have

loudly lamented the technological gap and the brain drain problems which are unassailable testimony to the high U.S. standing in scientific economy and culture.

SOME OF Carey's recent speculations on how to rationalize the R&D budget are reported in the January 1968 issue of *Industrial Research* magazine. He proposes a "social merit matrix," which seeks to give an objective score to competing research programs. Three value categories are assumed to have equal weight: economic, cultural and geopolitical.

When the matrix is applied, we then find that population control scores 21; lunar exploration 37 and oceanography 52. Is this an unconscious parody of rational decision-making?

THERE ARE FEW world problems more objectively and gravely documented than the need to keep population growth in pace with agricultural and industrial development.

Tactical flaws in our science policies are as numerous as in any other important endeavor. But before we overturn the system to make it conform to some absolute standards of merit, we ought to be sure we are substituting something pragmatically better.

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